REMARKS

Claims 1-40 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 112, Second Paragraph, Rejection:

With regard to claims 12 and 39, the Office Action states "the phrase 'to choose a low power request' cannot be ascertained because 'none of the devices are present'". It is unclear to the Applicants exactly why the Examiner believes this wording to be indefinite. Applicants respectfully traverse this rejection for at least the following reasons.

The Examiner does not clearly state why he believes the claim to be indefinite. Perhaps the examiner is asserting that under claim 12 the arbiter would be incapable of choosing a voltage request because no devices are present to assert voltage requests. However, nothing in claims 1 and 12 limits the arbiter to choosing a voltage request from only those voltage requests that it receives from the devices. Claim 1 is an open-ended claim and does not limit other possible sources or types of requests to the arbiter. According to claim 12, if the devices are not present, the arbiter is configured to choose a low power voltage request. Claim 12 does not require that the low power voltage request come from one of the devices. In fact, clearly it must come from some other source since, in this case, none of the devices are present.

On the other hand, perhaps the Examiner is asserting that the phrase 'none of the devices are present' is inconsistent with claim 1 which recites "a plurality of devices." However, the Examiner should note that the phrase "none of the devices are present" is a part of the conditional phrase "if the plurality of device present signals indicate that none of the devices are present." The arbiter may be configured to handle various conditions in addition to the particular condition recited in claim 1. In other words, just because claim 1 recites that devices are present, that does not mean that the arbiter cannot also be

capable of handling the case where no devices are present. Devices may be added or removed. Claim 1 does not require that the number of devices remain static. Claim 1 only requires that at some point in time a plurality of devices are present. Regardless, the arbiter can certainly be configured to handle more than one situation.

Section 102(e) Rejection:

The Office Action rejected claims 1-5, 11-21, 30-32 and 40 under 35 U.S.C. § 102(e) as being anticipated by Voegeli et al. (U.S. Patent 6,448,672) (hereinafter "Voegeli"). Applicants respectfully traverse.

Claim 1 recites, in pertinent part, "an arbiter configured to receive the voltage requests asserted by the devices, to choose a voltage request and to output the chosen voltage request to one or more power supplies, wherein if any of the voltage requests asserted by the devices specify a voltage that is distinct from the voltage specified by any other of the voltage requests asserted by the devices, the arbiter is configured to choose a voltage request and to output the chosen voltage request to the one or more power supplies".

In contrast, Voegeli, at col. 9, lines 47 through 49, teaches "In the event that MB voltage requirements do not equal MA voltage requirements, the controller would not proceed to power up the modules 10" and at col. 9, line 67 through col. 10, line 2, "if voltage V3 is outside the range of V1-V2, then an un-resolvable conflict is present and power system controller 4 reports an error condition" (emphasis added).

It is clear that if Voegeli's system includes two modules, A and B, and if module A requests voltage V1 while module B requests voltage V2, where V1 is not equal to V2, an un-resolvable conflict results and no power is supplied to the devices. On the other hand, if the same condition is present in the claimed system, the arbiter chooses either V1 or V2, and forwards the corresponding chosen voltage request to the power supplies for the devices. Therefore, the claimed arbiter operates differently from Voegeli's controller.

In the Telephone Interview of 3/22/04 between the Examiner and Applicants' representative, the examiner asserted that in the example of col. 9, lines 61 through 67, Voegeli teaches the first module 10 specifies a voltage range V1-V2 and also requests a specific voltage within this range. The examiner further asserted that if the requested voltage were not equal to the specific voltage V3 requested by the second module 10, the power system controller would resolve the potential conflict by supplying both modules 10 with voltage V3. The Applicants respectfully disagree with this analysis of the cited example.

Voegeli, col. 8, lines 13 through 15 teaches "power system controller 4 may retrieve power supply requirement parameters for each attached electronic circuit or module 10 using communications bus 12", and at col. 8, lines 32 through 33, "a voltage control parameter indicates the preferred rail voltage (i.e., max voltage requested by a module 10)". Additionally, Voegeli, col. 9, lines 56 through 57 teaches "the modules 10 may specify a range for the required voltage rails".

Thus it is clear that Voegeli's module 10 does not generate a voltage request as such, but rather power system controller 4 requests power supply requirement parameters including one or more voltage control parameters associated with a module 10. In some cases the power supply requirement parameters may include a single voltage control parameter indicating the maximum voltage usable by the module, while in other cases a pair of voltage control parameters may be used to specify a range of voltages usable by the module.

In Voegeli's example cited by the Examiner, the voltage control parameters of a first module 10 specify a voltage range of V1-V2, while the voltage control parameter of a second module 10 specifies a single voltage V3. There is no indication whatsoever of the first module 10 asserting a request for a specific voltage within the range of V1-V2. Voegeli's power system controller receives the entire voltage range associated with the first module 10 along with a specific voltage (associated with the second module 10) that

is within the range associated with the first module 10. This is in contrast to the Examiner's assertion that the power system controller is operating on two specific, unequal (distinct) voltages in the cited example.

Applicants further assert that since V3 is within the V1-V2 range, the cited example does not read on "if any of the voltage requests asserted by the devices specify a voltage that is distinct from the voltage specified by any other of the voltage requests asserted by the devices", as recited in claim 1.

In Voegeli's follow-up example, at col. 9, line 67 through col. 10, line 2, where V3 is outside the range of V1-V2, the specified voltages are distinct and Voegeli's power system controller reports an error condition due to an un-resolvable conflict without powering up the modules. In contrast under these conditions, the arbiter of claim 1 "is configured to choose a voltage request and to output the chosen voltage request to the one or more power supplies". Therefore, the Applicants assert that the claim 1 patentably distinguishes over Voegeli.

Independent claims 17 and 30 are not anticipated for reasons similar to those given with regard to claim 1. The applicants assert that the claims depending from these independent claims are patentable over Voegeli for at least the reasons given with regard to claim 1.

Section 103(a) Rejection:

The Office Action rejected claims 6-10, 22-26 and 33-39 under 35 U.S.C. § 103(a) as being unpatentable over Voegeli. Applicants respectfully traverse this rejection for the following reasons.

With regard to claims 6-8, 22-24 and 33-35, the Office Action states that Voegeli does not teach or suggest "the use of a 'low power signal' to indicate whether the devices should be placed in sleep or idle mode". The Examiner takes official notice that placing

a device under sleep or idle mode using a low power indicative signal is well known. However, although placing a device under sleep or idle mode using a low power indicative signal may be well known in other contexts, the use of a low power signal in a voltage request arbiter as claimed in combination with the other limitations of Applicants' claims is not known in the prior art. The prior art does not suggest combining such functionality with a voltage request arbiter. The Examiner points to the other cited references. However, none of the cited art mentions a low power signal or for that matter makes any reference to power saving modes of operation, let alone suggesting this functionality in a voltage request arbiter as claimed by Applicants. Therefore, the rejection is improper.

In the Final Action, the Examiner refers to the power saving mode for Intel's Pentium platform. However, this simply supports Applicants' argument. The Intel Pentium platform may very well specify a power saving mode, but it does not suggest that a power saving mode be implemented using a low power signal to a voltage request arbiter as claimed in combination with the other limitations of Applicants' claims. Even if a power savings mode was employed in Voegeli according to the Pentium platform, it would be handled separately from the module voltage selection functionality described in Voegeli.

A similar argument applies in regard to the limitations of claims 9, 10, 25, 26 and 36-39.

Request for Telephone Interview:

If upon considering the above remarks the Examiner still does not intend to allow the application, Applicants request that the Examiner contact the undersigned attorney, Robert Kowert, at (512) 853-8850 to discuss how the application may be placed in condition for allowance

CONCLUSION

Applicants submit the application is in condition for allowance, and notice to that effect is requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above referenced application from becoming abandoned, Applicants hereby petition for such extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5500-64900/RCK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Petition for Extension of Time

☐ Notice of Change of Address

☐ Fee Authorization Form authorizing a deposit account debit in the amount of $ for fees ( ).

☐ Other:

Respectfully submitted,

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Date: ___March 25, 2004___